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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/769,030	01/30/2004	Satoshi Oshima	16869S-104700US	7614

20350   7590   04/27/2007
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EXAMINER
CAMPOS, YAIMA

ART UNIT	PAPER NUMBER
2185	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/27/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *23 February 2007*.

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1,3-5 and 7-21* is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1,3-5 and 7-21* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☒ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a) ☐ All   b) ☐ Some * c) ☐ None of:

   1. ☐ Certified copies of the priority documents have been received.

   2. ☐ Certified copies of the priority documents have been received in Application No. _____.

   3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
   Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

1.   The instant application having Application No. 10/769,030 has a total of 19 claims

pending in the application; there are 6 independent claims and 13 dependent claims, all of which

are ready for examination by the examiner. Claims 1, 3-5 and 7-21 are pending in the instant

Application.

Continued Examination Under 37 CFR 1.114

2.   A request for continued examination under 37 CFR 1.114, including the fee set forth in

37 CFR 1.17(e), was filed in this application after final rejection. Since this application is

eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e)

has been timely paid, the finality of the previous Office action has been withdrawn pursuant to

37 CFR 1.114. Applicant's submission filed on February 9, 2007 has been entered.

OBJECTIONS TO THE SPECIFICATION

3.   Claim 21 is objected to because of the following informalities:

4.   Claim 21 recites "the control unit (102);" this term should be corrected to read –**the**

control unit-.

5.   Appropriate correction is required.

REJECTIONS BASED ON PRIOR ART

Claim Rejections - 35 USC § 102

6.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7.   **Claims 1, 3-4, 9-15 and 17-21** are rejected under 35 U.S.C. 102(b) as being anticipated

by Moshfegui et al. (US 6,779,119).

8.   As per **claims 1, 10, 12-13 and 17**, Takaichi discloses

"A storage device/read-ahead method having a capability of learning access patterns,

comprising:" [**Moshfegui discloses "the invention relates to the field of computer systems,**

and in particular to systems with data access latency" (Col. 1, lines 9-10) wherein "a

learning system may be used to predict which customer's record are going to be accessed

next" (Col. 3, lines 53-55)]

"a control unit;" [**Moshfegui discloses the combination of "task processor 130," "data miner**

140" and "prefetcher 120 having cache 180" (Figures 1-2 and related text)]

"a cache memory;" [**Moshfegui discloses "cache 180" (Figure 1 and related text; Also see**

"caches" (Figure 3)]

"and a disk device;" [**Moshfegui discloses "data files 225" storage (Figure 1); "graphics data**

355" and "text data" storages (Figure 3)]

"wherein said control unit records access history information that identifies a data access pattern

and, a history of data readout activity having been performed for the disk device by each

computer among a plurality of computers connected to said storage device [**"the data miner 140**

processes a database that contains a history of usage of the system, hereinafter termed a

usage log 150, for each user of the system... The entries in the usage log 150 include a

subset of the commands, or requests, that each user has submitted in the past. In a

preferred embodiment, each entry in the usage log 150 includes an identification of the

user, the command, and the parameter, or arguments, associated with the command. The

entry in a preferred embodiment also includes the date, time, and location of the user when

the request was made" (Col. 2, lines 44-65) "Note that the term commands of interest is

used herein in the general sense, and is intended to include files of interest, record of

interest, and so on" (Col. 3, lines 15-18) wherein "for an individual user, the usage log may

include time-dependent patters, location-independent patterns, time-dependent patterns,

location-dependent patterns, location-and-time-dependent patterns, and so on" (Col. 3,

lines 19-26) and explains "based on the user's prior usage patterns, the system prefetches

information in anticipation of the user's request" (Col. 2, lines 7-9)]

respectively reading out data from said storage device, based on predetermined information,

including both a first information for specifying the access history and a second information

indicating the specified computer, pre-reads data to be used by said one of said computers from

said disk device to said cache memory, based on a command containing information for

specifying said history and information for specifying and information for specifying said one of

said computers, the command being received from a management computer communicating with

the storage device; determines data to be pre-read in accordance with said data access pattern and

said history of data readout activity of said one of said computers; and ["based on the user's

prior usage patterns, the system prefetches information in anticipation of the user's

request" (Col. 2, lines 7-9) wherein "the data miner 140 creates a set of anticipated

commands 160 corresponding to the current user of the system 100. As a minimum, the set

of anticipated commands 160 contains an identification of the command and any

parameters required to effect the command" (Col. 3, line 63-Col. 4, line 1) "in accordance

with one aspect of this invention, the prefetcher 120 selects one or more anticipated

commands 161 form the set of anticipated commands 160 and submits tasks 162 to the task

processor 130 for execution. This selection and submission is performed before the user

submits a request 101 corresponding to this command 161. In response to this command,

the task processor 130 effects the appropriate action, and provides a response 165 to the

prefetcher 120... the prefetcher submits a download task 162 to the task processor 130 for

that x-ray. The task processor 130 communicates with the server, receives the requested x-

ray, and communicates the x-ray to the prefetcher 120 as a task response 165 in a cache

memory 180, in anticipation of the request 101 from the user for a display of the x-ray"

(Col. 4, lines 37-56). See (Figure 2) which depicts client-server computer system]

wherein the control unit records said history into a predetermined unit for controlling the cache

memory, as being linked with said information for specifying said history and said information

for specifying said computer, and reads data from said disk device to said cache memory, based

on said history linked with said information for specifying said computer and said information

for specifying said history contained in said command in response to receiving said command

from the management computer [With respect to this limitation, Moshfegui discloses "usage

log 150" containing usage history of the system for each user identified by user id (Col. 2,

lines 44-65) and explains having data miner 140 create a set of anticipated commands

corresponding to the current user of the system (Col. 3, line 53-Col. 4, lines 1) based on the

usage pattern linked to this user (Col. 1, lines 3-20; Col. 3, lines 19-24) wherein

"prefetcher" submits tasks to task processor and task processor provides data

corresponding to the set of anticipated commands to prefetcher so that prefetcher stores

this data in a cache memory, in anticipation of user requests (Col. 4, lines 38-56) (See

Figures 1-2 and related text)].

9.   As per **claim 3 and 14-15**, Moshfegui discloses "A storage device according to claim 2,

wherein said predetermined information includes information on time, and said control unit

records said history as being linked with information for specifying said history and information

for specifying said computer until a predetermined time" **["the data miner 140 processes a**

database that contains a history of usage of the system, hereinafter termed a usage log 150,

for each user of the system... The entries in the usage log 150 include a subset of the

commands, or requests, that each user has submitted in the past. In a preferred

embodiment, each entry in the usage log 150 includes an identification of the user, the

command, and the parameter, or arguments, associated with the command. The entry in a

preferred embodiment also includes the date, time, and location of the user when the

request was made" (Col. 2, lines 44-65)].

10.   As per **claim 4**, Moshfegui discloses "A storage device according to claim 3," **[See**

rejection to claim 3 above] "wherein said predetermined information includes information for

specifying a data storage location of said disk device, and said control unit records said history as

being linked with said information for specifying said history and said information for specifying

said computer from a time when said computer specified by said information for specifying said

computer reads out data stored at a data storage location of said specified disk device" **["the**

data miner 140 processes a database that contains a history of usage of the system,

hereinafter termed a usage log 150, for each user of the system... The entries in the usage

log 150 include a subset of the commands, or requests, that each user has submitted in the

past. In a preferred embodiment, each entry in the usage log 150 includes an identification

of the user, the command, and the parameter, or arguments, associated with the command.

The entry in a preferred embodiment also includes the date, time, and location of the user

when the request was made" (Col. 2, lines 44-65) and explains "a particular user who is

known to typically access image data 355 at server 331. In accordance with this aspect of

the invention, if this user logs onto a client 311, for example, that is bound to server 321, the

server 321 redirects the binding of the client 211 to server 32" (Col. 8, lines 34-39)].

11.   As per **claim 9**, Moshfegui discloses "A storage device according to claim 1," [**See

rejection to claim 1 above**] "wherein the history is arranged to be recorded in form of a table

specifying a relationship among a history ID, the data readout location and the computer using

the data having been stored in the location" ["**in a preferred embodiment, each entry in the**

usage log 150 includes an identification of the user, the command, and the parameter or

arguments associated with the command. The entry in a preferred embodiment also

includes the date, time, and location of the user when the request was made" (Col. 2, lines

55-59) wherein; for example, "a particular user who is known to typically access image

data 355 at server 331. In accordance with this aspect of the invention, if this user logs onto

a client 311, for example, that is bound to server 321, the server 321 redirects the binding of

the client 211 to server 32" (Col. 8, lines 34-39)].

12.   As per **claim 11**, Moshfegui disclsoes "A system according to claim 9," [**See rejection**

to claim 9 above] "wherein said management computer includes information about schedule of

a designation to be transmitted to said storage device by said computer itself, and said

management computer transmits said first command or second command to said storage device

based on said schedule" **[With respect to this limitation, Moshfegui discloses based on the**

user's usage pattern, the cache maintains the information that is likely to be accessed

wherein "the prefetching of anticipated commands provides for a reduction in the actual

response time to a user request 101, as measured by the time duration between the

submission of the request and the receipt of a response to this request 101" (Col. 6, lines 4-

17) and also explains an administrator may have access to a scheduling program(Col. 8,

line 65-Col. 9, line 3)].

13.   As per **claim 18**, Moshfegui discloses the storage device according to claim 1, wherein

the second information comprises a MAC (Media Access Control) address **[With respect to this**

limitation, Moshfegui discloses "The entry in a preferred embodiment also includes the

date, time, and location of the user when the request was made" (Col. 2, lines 44-65)

wherein the location of the user corresponds to the client computer from which the user is

accessing data (See figure 2 and related text). Applicant should note that this corresponds

to a "MAC address" which is well known in the art to comprise the physical address of a

device connected to a network].

14.   As per **claim 19**, Moshegui discloses the storage device according to claim 1, wherein the

command comprises a PointRead-command for instructing the storage device to start a pre-read

operation to be performed by the control unit in response to a predetermined condition having

been defined in advance for starting the pre-read operation **["in accordance with one aspect of**

this invention, the prefetcher 120 selects one or more anticipated commands 161 form the

set of anticipated commands 160 and submits tasks 162 to the task processor 130 for

execution. This selection and submission is performed before the user submits a request

101 corresponding to this command 161. In response to this command, the task processor

130 effects the appropriate action, and provides a response 165 to the prefetcher 120... the

prefetcher submits a download task 162 to the task processor 130 for that x-ray. The task

processor 130 communicates with the server, receives the requested x-ray, and

communicates the x-ray to the prefetcher 120 as a task response 165 in a cache memory

180, in anticipation of the request 101 from the user for a display of the x-ray" (Col. 4, lines

37-56)].

15.   As per **claims 20-21**, these claims are rejected for the same reasons as recited above with

respect to claims 1, 10m 13 and 17; further requiring wherein the second information comprises

a MAC (Media Access Control) address [**With respect to this limitation, Moshfegui discloses**

"The entry in a preferred embodiment also includes the date, time, and location of the user

when the request was made" (Col. 2, lines 44-65) wherein the location of the user

corresponds to the client computer from which the user is accessing data (See figure 2 and

related text). Applicant should note that this corresponds to a "MAC address" which is

well known in the art to comprise the physical address of a device connected to a network]

and a PointRead-command for instructing the storage device to start a pre-read operation to be

performed by the control unit in response to a predetermined condition having been defined in

advance for starting the pre-read operation [**"in accordance with one aspect of this invention,**

the prefetcher 120 selects one or more anticipated commands 161 form the set of

anticipated commands 160 and submits tasks 162 to the task processor 130 for execution.

This selection and submission is performed before the user submits a request 101

corresponding to this command 161. In response to this command, the task processor 130

effects the appropriate action, and provides a response 165 to the prefetcher 120... the

prefetcher submits a download task 162 to the task processor 130 for that x-ray. The task

processor 130 communicates with the server, receives the requested x-ray, and

communicates the x-ray to the prefetcher 120 as a task response 165 in a cache memory

180, in anticipation of the request 101 from the user for a display of the x-ray" (Col. 4, lines

37-56)].

16.   **Claim 5** is rejected under 35 U.S.C. 103(a) as being unpatentable over Takaichi (US

2003/0018849) and Omura et al. (US 5,687,347) as applied to claims 1-2, 6, 9-13 and 16 above,

and further in view of Letwin (US 5,257,370).

17.   As per **claim 5**, Moshfegui discloses "A storage device according to claim 4," [See

rejection to claim 4 above] but does not disclose expressly "wherein when a command of

stopping record of said history is received, the record of said history is stopped."

Letwin discloses "wherein when a command of stopping record of said history is

received, the record of said history is stopped" as **[With respect to this limitation, Letwin**

discloses that "when a read request is received, the range of data read and access time is

monitored. Each access is recorded until the read operation is completed ad detected"

(Column 3, lines 43-46) as accessing data within a predetermined amount of time and

having "detecting" means to detect when a data access takes more time than a

predetermined amount of time. Letwin and also discloses blocking "further operation until

the read operation is complete" (Column 5, lines 32-33) as equivalent to having a stop

command to stop recording data].

Letwin (US 5,257,370) and Moshfegui et al. (US 6,779,119) are analogous art because

they are form the same field of endeavor of accessing memory and prefetching/prereading data

likely to be accessed.

At the time of the invention it would have been obvious to a person of ordinary skill in

the art to combine Moshfegui and make the data to a data prereading method of a disk device,

which prereads data based on access history as taught by Moshfegui and further limit the time for

every access to data at taught by Letwin so that "wherein when a command of stopping record of

said history is received, the record of said history is stopped".

The motivation for doing so would have been because Letwin teaches that having a

predetermined time for each data access wherein **["a method and means for determining past-**

access behavior by a time a file is opened; thus eliminating the delay typically required to

create a past behavior log" (Column 2, lines 4-8) and also explains that this "improves the

speed and performance of a computer system" (Column 2, lines 34-35)]

Therefore, it would have been obvious to combine Moshfegui et al. (US 6,779,119) and

Letwin (US 5,257,370) for the benefit of creating a data storage prereading sytem/method to

obtain the invention as specified in claim 5.

18.   **Claim 7-8** are rejected under 35 U.S.C. 103(a) as being unpatentable over Moshfegui et

al. (US 6,779,119) as applied to claim 4 above and Moshfegui et al. (US 6,779,119) and Letwin

(US 5,257,370) as applied to 5 above; respectively, and further in view of Kedem et al. (US

2003/0037202).

19.   As per **claims 7 and 8**, the combination of Takaichi and Omura discloses "A storage

device according to claim 4," **[See rejection to claim 4 above]** but fails to disclose expressly

that "an operating system program to be used by said specified computer is stored in a location

specified by the information for specifying the data storage location of said disk device".

Kedem discloses "an operating system program to be used by said specified computer is

stored in a location specified by the information for specifying the data storage location of said

disk device" as **["The present invention is generally related to persistent storage devices,**

and, more specifically, to a system and method for enabling the centralized storage and

maintenance of persistent storage device data images" (Page 1, Paragraph 0003) and also

teaches that "DIMS is capable of updating the cached data image at its convenience, that is

in a pull rather than a push mode, the DIMS allows all of a computer's software (operating

system, software applications, and other data) to be installed and maintained at a remote

site" (Page 8, Paragraph 0110)].

Takaichi (US 2003/0018849), Letwin (US 5,257,370), Omura et al. (US 5,687,347) and

Kedem et al. (US 2003/0037202) are analogous art because they are form the same field of

endeavor of memory accessing.

At the time of the invention it would have been obvious to a person of ordinary skill in

the art to combine Takaichi (US 2003/0018849), Omura et al. (US 5,687,347) and Kedem et al.

(US 2003/0037202) to make the data prereading method of a disk device, which prereads data

based on access history as taught by Takaichi, further include the ability of taking information

specifying each host/client/requesting computer into account when more than one host computer

is used, as disclosed by Omura and further make "the data" that is to be accessed/preread be data

dealing with a computer's software such as operating system, software applications and other

data as specified by Kedem.

The motivation for doing so would have been because Kedem teaches that having a

computer's software such as operating system, software application and other data stored at

remote locations ["**gives users unprecedented benefit as it requires no support form the local**

operating system or application software" (Page 8, Paragraph 0110) and also explains that

"because the physical data image is store remotely, operating systems, applications and

other data may be updated on the remote persistent storage device(s) by Information

Technology (IT) professionals (through high-level interfaces such as NTFS)" (Page 8,

Paragraph 0110)].

Therefore, it would have been obvious to combine Kedem et al. (US 2003/0037202) with

Omura et al. (US 5,687,347) and Takaichi (US 2003/0018849) for the benefit of creating a data

storage prereading sytem/method to obtain the invention as specified in claims 7 and 8.

20.   **Claim 16** is rejected under 35 U.S.C. 103(a) as being unpatentable over Moshfegui et al.

(US 6,779,119) as applied to claim 10 above, and further in view of Omura et al. (US 5,687,347).

21.   As per **claim 16**, Moshfegui discloses "A system according to claim 10," [**See rejection**

to claim 10 above] but does not disclose expressly "wherein said management computer

classifies said plurality of computers into a plurality of groups when registering said computers."

Omura discloses, "wherein said management computer classifies said plurality of

computers into a plurality of groups when registering said computers" as [**With respect to this**

limitation, Omura discloses "the present invention relates to a data providing device and a

file server device" using a "data transfer control method for prefetching data from a

storage device" (Column 1, lines 8-9 and 12-13). Omura further explains having a "request

input section for receiving data request commands, sent over a network from a plurality of

data request sections of a plurality of data request devices" and also discloses "a request-command storing section for storing the data request commands received by the request input section by grouping the request commands for each data request section of each data request device" (Column 4, lines 31-39)] "a request-command storing section for storing the data request commands received by the request input section by grouping the request commands for each data request section of each data request device" (Column 4, lines 31-39)].

Moshfegui et al. (US 6,779,119) and Omura et al. (US 5,687,347) are analogous art because they are from the same field of endeavor of computer memory access and control.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to combine Moshfegui et al. (US 6,779,119) with Omura et al. (US 5,687,347) and make the data to a data prereading method of a disk device, which prereads data based on host access history as taught by Moshfegui, further include the ability of "wherein said management computer classifies said plurality of computers into a plurality of groups when registering said computers.

The motivation for doing so would have been because Omura teaches that ["the file server device of the invention has the advantage that the number of terminals that can be attached can be further increased compared to the prior art device" (Column 5, lines 37-39). Omura also teaches that identifying a "requesting device" aids in determining whether a certain device was "previously requested by that terminal" (Column 5, line 43) so that "prefetching can be performed with well-balance for a plurality of terminals, that data can

be transmitted at equal rates, and that the speed of processing can be improved" (Column

6, lines 7-9)].

Therefore, it would have been obvious to combine Omura et al. (US 5,687,347) with

Moshfegui et al. (US 6,779,119) for the benefit of creating a data storage prereading

system/method to obtain the invention as specified in claim 16.

ACKNOWLEDGMENT OF ISSUES RAISED BY THE APPLICANT

Response to Amendment

22.   Applicant's arguments filed on November 6, 2006 and February 23, 2007 have been fully

considered but they are moot in view of new grounds of rejection.

ARGUMENTS CONCERNING PRIOR ART REJECTIONS

23.   Claims must be given the broadest reasonable interpretation during examination and

limitations appearing in the specification but not recited in the claim are not read into the claim

(See M.P.E.P. 2111 [R-1]).

FIRST POINT OF ARGUMENT

24.   Regarding Applicant's remarks defining an access pattern to the storage device as "for

example, sequential access, random access;" the Examiner would like to respectfully point out

that this limitation is not found within the claim language.

25.   All arguments by the applicant are believed to be covered in the body of the office action

or in the above remarks and thus, this action constitutes a complete response to the issues raised

in the remarks dated November 6, 2006 and February 23, 2007.

CLOSING COMMENTS

Examiner's Note

26.   Examiner has cited particular columns and line numbers in the references as applied to

the claims above for the convenience of the applicant. Although the specified citations are

representative of the teachings in the art and are applied to the specific limitations within the

individual claim, other passages and figures may apply as well. It is respectfully requested from

the applicant, in preparing the responses, to fully consider the references in entirety as potentially

teaching all or part of the claimed invention, as well as the context of the passage as taught by

the prior art or disclosed by the examiner.

STATUS OF CLAIMS IN THE APPLICATION

27.   The following is a summary of the treatment and status of all claims in the application as

recommended by **M.P.E.P. § 707.07(i)**:

a(1) CLAIMS REJECTED IN THE APPLICATION

28.   Per the instant office action, **claims 1, 3-5 and 7-21** have received a first action on the

merits and are subject to a non-final rejection.

29.   For at least the above reasons it is the examiner's position that the applicant's claims are

not in condition for allowance.
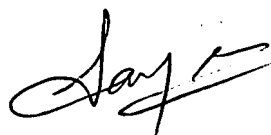
DIRECTION OF ALL FUTURE REMARKS

30.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yaima Campos whose telephone number is (571) 272-1232. The examiner can normally be reached on Monday to Friday 8:30 AM to 5:00 PM.
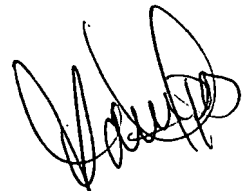
IMPORTANT NOTE

31.   If attempts to reach the above noted Examiner by telephone are unsuccessful, the Examiner's supervisor, Mr. Sanjiv Shah, can be reached at the following telephone number: Area Code (571) 272-4098.

32.   The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

April 23, 2007

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